

RESOLUTION NO. R3-2002-0117

ATTACHMENT - PROPOSED BASIN PLAN AMENDMENTS

1. Revise the September 8, 1994 Basin Plan, Chapter Four, as follows:

Add the following to chapter 4 after IX. D.:

IX. E. TOTAL MAXIMUM DAILY LOAD FOR PATHOGENS FOR MORRO BAY AND CHORRO AND LOS OSOS CREEKS

The Regional Water Quality Control Board adopted this TMDL on May 16, 2003.

This TMDL was approved by:

The State Water Resources Control Board on September 16, 2003.

The California Office of Administrative Law on November 19, 2003.

The U.S. Environmental Protection Agency on January 20, 2004.

TMDL Elements

Element													
Problem Statement	Numeric water quality objectives for fecal coliform set by the Regional Board and standards enforced by the California Department of Health Services (DHS) pursuant to the United States Department of Health Services Food and Drug Administration's National Shellfish Sanitation Program have been exceeded for shellfish harvesting and water contact recreation in Morro Bay. Elevated levels of fecal coliform in Morro Bay and Chorro and Los Osos Creeks indicate that pathogens are impairing water contact recreation and shellfish harvesting in these water bodies. High levels of pathogens may cause disease in humans and may also adversely affect marine animals. Portions of Morro Bay have been closed by DHS for commercial shellfish harvesting since 1996, and advisories have been posted to warn the public to avoid water contact activities. Morro Bay was identified as impaired for pathogens on the 1998 Clean Water Act Section 303(d) list of impaired water bodies.												
Numeric Targets	<p>Numeric targets for <u>Morro Bay</u>, based on regulations that DHS follows</p> <table><tr><th colspan="2">Fecal Coliform</th></tr><tr><th>Geometric Mean</th><th>Maximum</th></tr><tr><td>14 MPN/100 mL^a</td><td>43 MPN/100 mL^b</td></tr></table> <p>a: Based on the geometric mean of monthly sampling b: No more than 10% of total samples may exceed this number</p> <p>Numeric targets for the <u>tributaries</u> (including Chorro and Los Osos Creeks and fresh water seeps) to Morro Bay, based on Basin Plan objective</p> <table><tr><th colspan="2">Fecal Coliform</th></tr><tr><th>Geometric Mean</th><th>Maximum</th></tr><tr><td>200 MPN/100 mL^a</td><td>400 MPN/100 mL^b</td></tr></table> <p>a: Geometric mean of not less than five samples over a period of 30 days b: Not more than 10% of total samples during a period of 30 days exceed</p>	Fecal Coliform		Geometric Mean	Maximum	14 MPN/100 mL ^a	43 MPN/100 mL ^b	Fecal Coliform		Geometric Mean	Maximum	200 MPN/100 mL ^a	400 MPN/100 mL ^b
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Element	
Allocations and TMDL	This TMDL is expressed as concentrations that are equal to the numeric targets. For Bay waters, a geometric mean of 14 MPN/100 mL must be achieved and no more than 10% of the samples may be over 43 MPN/100 mL for <u>fecal coliform</u> . For tributaries (Chorro and Los Osos Creeks and fresh water seeps) to the Bay, the geometric mean shall not exceed 200 MPN/100 mL over a 30-day period nor shall 10% of the samples exceed 400 MPN/100 mL over any 30-day period for <u>fecal coliform</u> . Point and nonpoint sources cannot exceed the concentrations specified above. Therefore, the wasteload allocations and load allocations, which include background levels, are also equal to the numeric targets.
Margin of Safety	A margin of safety has been established implicitly through the use of protective numeric targets.
Linkage Analysis	The linkage analysis involves establishing the connection between the TMDL and pollutant load allocations and the protection of beneficial uses. This connection is established because the numeric targets are the TMDL. The numeric targets are protective of all the beneficial uses.
Implementation	<p>The bacterial load to Morro Bay derives from nonpoint sources (NPS) and point sources. As such, implementation will rely on the State's Plan for NPS pollution control (CWC §13369) and continued implementation of existing regulatory controls as appropriate for point sources, including storm water pursuant to NPDES surface water discharge regulations and Waste Discharge Requirements (Porter Cologne).</p> <p>Implementation emphasizes the activities of the Morro Bay National Estuary Program, Coastal San Luis Resources Conservation District, Farm Bureau, University of California Cooperative Extension, Natural Resources Conservation Service, Public/Private Landowners, Morro Bay Harbor Department, California Department of Fish and Game, City of Morro Bay, United States Coast Guard, San Luis Obispo County, Division of Animal Services, all of whom are not currently identified as dischargers responsible for bacterial loading, to implement self-determined activities (see Table: Trackable Implementation Actions (self-determined)). Other actions, currently required because of another Regional Water Quality Control Board (Regional Board) regulatory program, will be evaluated to make sure progress is taking place (see Table: Trackable Implementation Actions identified under existing regulatory programs). Regional Board Staff will meet annually with the implementing parties identified in the list of Trackable Implementation Actions Tables to provide technical assistance and to evaluate and track progress (see Table: Morro Bay TMDL for Pathogens Implementation Schedule for details). If at the end of year three, implementing parties fail to complete these self-determined activities or resulting management practices fail to reduce bacterial loads, then Regional Board staff will conduct inspections and investigations to identify individual responsible dischargers (e.g., landowners or public agencies). Additionally, if DHS determines shellfish standards are not met, Regional Board will consider that failure to achieve numeric targets. Regional Board staff may rely on Section 13267 of the California Water Code for investigation and identification of individual responsible dischargers. Regional Board staff will also rely on Section 13267 of the California Water Code to require reporting and/or monitoring to determine the level of implementation of identified activities to reduce bacteria. If necessary, the Regional Board may rely on enforcement authority, pursuant to California Water Code Section 13304, to require dischargers to clean-up and abate bacterial discharges and/or prevent the threat of discharges on a case-by case basis. Additionally, Implementation Actions (in the Table of Implementation Actions) may be identified as conditions of compliance with storm water permits and Waste Discharge Requirements. If progress toward bacterial reduction is not satisfactory, staff will develop a regulatory approach (rather than a self-determined approach) and present it to the Regional Board as a revised Basin Plan Amendment.</p>
Monitoring	Monitoring will be performed and evaluated by the DHS according to their regulations, the Morro Bay National Estuary Volunteer Program and the Regional Board to ensure that numeric targets are met and implementation actions are taking place. Should the Morro Bay National Estuary Volunteer Program be unable to sample, the Regional Board will sample to the extent practicable. Regional Board staff will review data on a triennial basis, at a minimum, and determine if progress towards fecal coliform reduction is adequate and whether changes to implementation actions are warranted (as described above). The data will be in a format compatible with Central Coast Ambient Monitoring Program (CCAMP) to allow for comparison of data and for public access.

Trackable Implementation Actions (self-determined)

PROJECT NAME	ACTION	SCHEDULE	IMPLEMENTING PARTIES
Grazing Management	Implement grazing management measures that reduce bacterial levels	Ongoing - 2012	MBNEP, CSLRCD, Farm Bureau, UCCE, NRCS, Public/Private Landowners
Boat Management, Pump-outs	Upgrade pump-out facilities, provide new facilities, improve accessibility	2002-2005	MBHD
Remove unpermitted moorings	Remove illegal moorings and prevent future ones	Ongoing - 2007	CDFG, MBNEP
Remove derelict boats	Remove abandoned, derelict boats and vessels in back bay	Ongoing - 2007	CDFG, MBNEP
Manage live aboard boating situation	Continue issuing permits to live aboards, continue with inspections	Ongoing - 2012	City of Morro Bay, USCG, CDFG, MBHD
Educate Public about proper boat waste disposal	Educate public about proper waste disposal	Ongoing - 2012	MBNEP, MBHD
Pet waste management	Create an off leash dog park, provide supplies to pick-up pet waste, ordinance	Ongoing -2012	MBNEP, City of Morro Bay, San Luis Obispo County
Septic System Maintenance	Inspect and maintain all septic systems throughout the watershed	2004 - continuous	San Luis Obispo County, LOCSD
Spay/neuter pets	Educate public to promote spaying and neutering pets	Ongoing -2012	Division of animal services
Reduce the number of feral dogs/cats	Reduce the number of feral dogs/cats	Ongoing - 2012	Division of animal services, feral cat caretakers

CDFG – California Department of Fish and Game
 CSLRCD – Coastal San Luis Resources Conservation District
 MBHD – Morro Bay Harbor Department
 MBNEP – Morro Bay National Estuary Program
 NRCS – Natural Resources Conservation Service
 UCCE – University of California Cooperative Extension
 USCG – United States Coast Guard
 LOCSD – Los Osos Community Services District

Trackable Implementation Actions (under existing regulatory programs)

PROJECT NAME	ACTION	SCHEDULE	RESPONSIBLE DISCHARGERS
Phase II stormwater permit	Incorporate actions to reduce bacteria loading into Morro Bay by implementing a stormwater management plan for the City of Morro Bay and the Community of Los Osos	March 2003 - 2008	City of Morro Bay LOCSD, San Luis Obispo County
Los Osos Community Waste Water Treatment Plant	Construct and maintain a wastewater treatment plant. To be regulated under a waste discharge requirement to be presented to the Board in December 2002.	Ongoing - 2007	LOCSD

Implementation Schedule for Morro Bay TMDL for Pathogens

At End of Implementation Year:	IMPLEMENTATION MILESTONE	MONITORING ACTIVITY	Chorro Creek TMDL	Los Osos Creek TMDL	Morro Bay TMDL
1	<ul style="list-style-type: none">• RWQCB evaluates data collected over past year, evaluates progress on actions• Meet with VMP, MBNEP, LOCSD, City of MB, County of SLO, DHS, MBHD, State Parks, CDFG, Farm Bureau to discuss progress• LOCSD waste water treatment plant WDR issued• Submittal of stormwater management plan and permit coverage (City of MB, LOCSD)	<div>Fecal coliform</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>
2	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions				
3	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions• Regional Board evaluates the monitoring of septic system maintenance in the watershed with the County of San Luis Obispo• RWQCB, MBNEP, VMP, LOCSD, City of MB, County of SLO, DHS, MBHD, State Parks, CDFG, Farm Bureau meet to determine TMDL <u>progress</u>.				
4	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions				
5	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions				
6	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions• LOCSD sewer installed• RWQCB, MBNEP, VMP, LOCSD, City of MB, County of SLO, DHS, MBHD, State Parks, CDFG, Farm Bureau meet to determine TMDL <u>progress</u>				
7	<ul style="list-style-type: none">• RWQCB evaluates data collected; evaluates progress on actions				
8	<ul style="list-style-type: none">• RWQCB evaluates data collected and evaluates progress on actions				
9	<ul style="list-style-type: none">• RWQCB evaluates data collected and evaluates progress on actions• RWQCB, MBNEP, VMP, LOCSD, City of MB, County of SLO, DHS, MBHD, State Parks, CDFG, Farm Bureau meet to determine TMDL <u>progress</u>				
10	<ul style="list-style-type: none">• RWQCB evaluates data collected and evaluates progress on actions				
	Load Reduction Achieved; Numeric Targets Achieved				

WDR – Waste Discharge Requirements